## IN THE CLAIMS

Please amend the following claims which are pending in the present application:

What is claimed:

1. (Previously presented) A method of photoresist removal comprising:

locating a substrate in a processing chamber;

exciting a mixture of gases comprising a majority component of a reducing process gas and a minority component of between 0.1% and 10% by volume of an oxygen-containing process gas to generate a reactive gas mixture including reactive radical species;

exposing a photoresist layer overlaying a dielectric layer on the substrate in the chamber to the reactive gas mixture to selectively remove the photoresist layer from the dielectric layer; and

forming a metal part adjacent to the dielectric layer without a wet clean following the removal of the photoresist .

2. (Original) The method of claim 1 wherein the reducing process gas includes at least one of hydrogen, ammonia, an alkane, and an alkene.

3. (Original) The method of claim 1 wherein the mixture flows through the chamber while the photoresist layer is removed.

4. (Original) The method of claim 3 wherein the component of the reducing process gas flows through the chamber at between 1 standard liter per minute and 10 standard liters per minute.

5. (Original) The method of claim 1 wherein the oxygen-containing process gas includes at least one of vaporized water, oxygen gas, carbon monoxide gas, carbon dioxide gas, and an alcohol vapor.

6. (Original) The method of claim 1 wherein the oxidizing process gas includes vaporized water.

7. (Original) The method of claim 1 wherein the oxidizing process gas substantially increases the rate of photoresist removal when compared with the reducing process gas alone.

8. (Original) The method of claim 1 further comprising:

heating the substrate prior to exposure to the reactive gas mixture, the substrate being at a temperature between 150°C and 400°C during exposure to the reactive gas mixture.

9. (Original) The method of claim 1 wherein the reactive gas mixture is primarily generated remotely from the substrate and substantially no ions are in the

reactive gas mixture flowing within containing walls from the locations where they are generated to the substrate.

10. (Original) The method of claim 9 wherein surfaces of the containing walls exposed to the reactive radical species are made of quartz.

11. (Original) The method of claim 9 wherein walls of the chamber form at least part of the containing walls.

12. (Original) The method of claim 11 wherein the reactive gas mixtures flows through a plurality of openings in a baffle in the chamber, surfaces of the baffle exposed to the reactive gas mixture being made of quartz.

13. (Original) The method of claim 9 further comprising:

preheating the containing walls to a temperature above 400°C before the reactive radical species flow from the location where they are generated to the substrate.

14. (Original) The method of claim 9, further comprising:

using an oxygen-rich gas to dry clean the chamber of organic and inorganic residues between wafer processing in addition to preheating.

15. (Original) The method of claim 1 wherein the reactive gas mixture removes residue from an opening in the dielectric layer.

16. (Previously presented) The method of claim 15 wherein the metal part is formed in the opening.

17. (Cancelled)

18. (Original) The method of claim 1 wherein the mixture is energized by an inductively-coupled radio-frequency source.

19. (Original) The method of claim 1 wherein the mixture is energized by at least one of a microwave source and a capacitively-coupled source.

20. (Original) The method of claim 1 further comprising:

applying a radio-frequency voltage bias to a stand on which the substrate is located.

21. (Original) The method of claim 20 further comprising:

applying a radio-frequency voltage bias to a baffle through which the gas flows.

22. (Original) The method of claim 1 wherein the dielectric is minimally altered after photoresist and residue removal treatment.

23. (Original) The method of claim 1 wherein the mixture includes a minority component of nitrogen gas.

24. (Original) The method of claim 1 wherein the mixture includes a minority component of a fluorine-containing process gas.

25. (Currently amended) A method of substrate processing, comprising:

forming a dielectric layer with a dielectric constant below 3 on a substrate;

forming a photoresist layer on the dielectric layer;

patterning the photoresist layer by forming openings therein;

exposing the photoresist layer and the dielectric layer to an etchant that etches the photoresist pattern into the dielectric layer;

locating the substrate in a processing chamber;

energizing a mixture of gases comprising a majority component of a reducing process ~~gas and a~~ gas, a first minority component of between 0.1% and 10% by volume of an oxidizing process gas, and a second minority component of a fluorine-containing process gas to generate a reactive gas mixture, the reactive gas mixture being primarily generated remotely on the substrate and substantially no ions being in the reactive gas mixture flowing within containing walls from locations where

they are generated to the substrate, walls of the chamber forming at least part of the containing walls; and

exposing a photoresist layer overlaying a dielectric layer on the substrate in the chamber to the reactive gas mixture to selectively remove the photoresist and organic ARC layer from the dielectric layer, the reactive gas mixture flowing through a plurality of openings in a baffle in the chamber, surfaces of the baffle exposed to the reactive gas mixture being made of quartz.

26. ( New) The method of claim 25, wherein the fluorine-containing process gas is between 0.1% and 10% of the mixture.

27. (New) The method of claim 26, wherein the fluorine-containing process gas includes at least one of $CF_4$, $NF_3$, $CH_3$,F, $CH_2$,$F_2$, $CHF_3$, $C_2$,$F_6$, $C_4$,$F_6$, and $C_4$,$F_8$.